

A COLLATION OF THE MOLLUSCAN PARTS OF THE SYNOPSES
OF THE CONTENTS OF THE BRITISH MUSEUM, 1838-1845.

By TOM IREDALE.

Read 10th January, 1913.

I HAVE had occasion in this periodical to point out that some of the generic names commonly cited as "Gray 1840", and a reference given to the "Synopsis. Brit. Mus.", could not be referred to that date, since apparently the new names there mentioned were *nomina nuda*. My friend Mr. Charles Hedley admitted that he had never seen the book, on account of its rarity. In a recent letter to me Dr. W. H. Dall wrote: "Much trouble would have been saved if we had only had a copy of Gray's 1840 Synopsis on this side of the water. I never got even a sight of it." Such information indicated the necessity of an endeavour to terminate the uncertainty surrounding this work. The best means of publicity seemed to be the reproduction in these Proceedings of the few pages dealing with Mollusca.

Upon investigation I found that Mr. C. Davies Sherborn had carefully noted all the new names as *nomina nuda*, and that these were catalogued and available to workers at the British Museum (Natural History). This paper, however, is written for the benefit of extra-London workers, for Mr. Sherborn's much-desired second volume will not be ready for publication for some time.

Under the title "Synopsis of the Contents of the British Museum" booklets were issued, apparently at irregular intervals, between the years 1808 and 1856, running into sixty-three editions. These covered the whole of the subjects in the British Museum, and their scope can be estimated by the warning given on the inside of the title-page. This reads: "The public are apprised that this Synopsis is merely intended for the use of persons who take a cursory view of the Museum." The result of this notice is seen in the fact that of the 1840 Synopsis I have only heard of the existence of two copies, one at the old British Museum, and the other at the Natural History branch at South Kensington.

In the thirty-sixth edition, dated 1838, the matter relating to molluscs reads in this style: "Cases 3 and 4 contain the shells of those Gasteropodous Mollusca that have the branchiæ similar to the former . . . They generally have a fringe on each side of their body, as the genera *Trochus*, *Monodonta*, and *Haliotis*." No new names are introduced, and the booklet has no interest to the systematist.

In the thirty-seventh edition, also dated 1838, the subject is more fully dealt with. Thus: "The Gasteropoda are divided into orders according to the form of their respiratory organs. The greater number of those furnished with shells have comb-like gills placed over the back of the neck. They are called *Cteno-branchiata* . . . Cases 5, 6, 7 contain the family of the *Strombidae*, which are peculiar for having a sinus formed by the head of the animal, and placed on the side of the canal, as the true *Strombus*, *Pteroceras*,

Rostellaria, *Aporrhais*, and *Struthiolaria*." This method is followed throughout, similar notes being given about the families admitted. I do not see any new names, however, but I noted a few misspellings as *Truneatella*, *Gasteroptera*, *Syphonaria*, and *Nannia* (? for *Nanina*). This account is signed by J. G. Children.

The thirty-eighth (1839), thirty-ninth (1839), and fortieth (1840) editions agree in detail, even the misspellings remaining unaltered.

It is obvious that these also have no systematic value.

In the forty-first edition there is no matter about shells, a note being given on p. 53 to the following effect:—

“TWELFTH AND THIRTEENTH ROOMS.

“The first of these Apartments, till lately, held the Collections of British Birds and British Shells, with a small assemblage of Birds’ Eggs. These have been removed, and with the general collection of Birds and Shells, which filled the Thirteenth Room, are now in progress of rearrangement in the East Gallery.”

The forty-second edition, dated 1840, is the important one, since the preliminary account, although after the manner of the preceding, is somewhat more fully rewritten, and contains a few new generic names with scant remarks diagnostic of them. Appended, however, is a general classification, which is here reprinted.

While engaged upon editing this paper, Mr. Edgar A. Smith consulted another copy of the “forty-second edition” dated “1840”. This copy, preserved in the Library of the Zoological Department at the Natural History branch, differs from the one just noted in that in the preliminary account whole paragraphs concerning families not separated in the former are here inserted, whilst the classification following is much amplified, many additional genera occurring, but, as far as I can observe, only one new one, viz. *Livona*. Two obvious misprints were noted: p. 151, *Ringula* (= *Ringicula*), and p. 153, *Papa* (= *Pupa*). The pagination of course differs, the tables occupying pp. 150–6. The tables are signed at the end “John Edward Gray, Nov. 4, 1840”. I propose to refer to this copy in the succeeding notes as 1840A.

“The following Tables exhibit the series of genera of Mollusca at one view” :—

p. 146.	<i>Rostellaria</i> , 2 <i>b</i> .	<i>Fusus</i> , 8.
Sub-kingdom :	<i>Terebellum</i> , 2 <i>b</i> .	<i>Pyruia</i> , 8.
MOLLUSCA.	Family 2: <i>Muricidæ</i> .	<i>Tritonium</i> , 8.
Class I :	a. <i>Ranella</i> , 3 <i>a</i> .	<i>Struthiolaria</i> , 8.
GASTEROPODA.	<i>Triton</i> , 3 <i>b</i> , 4.	<i>Aporrhais</i> , 8.
Section I :	<i>Persona</i> , 4.	d.* <i>Lathirus</i> .
CTENOBRANCHIATA.	<i>Apollon</i> , 4.	<i>Polygona</i> .
Order I: ZOOPHAGA.	b. <i>Murex</i> , 4 <i>c</i> .	<i>Turbinellus</i> .
Family 1: <i>Strombidæ</i> .	<i>Brontes</i> , 4.	<i>Cynodonta</i> .
<i>Strombus</i> , 1.	<i>Chicoreus</i> , 4 <i>d</i> , 5.	<i>Fasciolaria</i> .
<i>Pteroceras</i> , 2 <i>a-b</i> .	<i>Typhis</i> , 6.	<i>Cancellaria</i> .
	c. <i>Pleurotoma</i> , 7.	Family 3: <i>Buccinidæ</i> .
	<i>Clavatula</i> , 7.	a. <i>Cassiss</i> .
	<i>Conus</i> , 7.	<i>Cassidaria</i> .

- p. 147.
- Oniscia.
Dolium.
- b. Harpa.
Purpura.
Monoceros.
Planaxis.
Quoyia.
Concholepas.
Ricinula.
Magilus.
Leptoconchus.
Buccinum.
Terebra.
Nassa.
Phos.
Bullia.
Cyllene.
Oliva.
Ancilla.
Eburna.
- Family 4: *Volutidae*.
Cymbium.
Voluta.
Mitra.
Volvaria.
Imbricaria.
Marginella.
Percicula.
- Family 5: *Cypræadae*.
Cypræa.
Cyprovula.
Trivia.
Erato.
Ovula.
Coriocola.
- Order II: PHYTOPHAGA.
1. *Podophthalma*.
Family 1: *Turbinidae*.
Turbo.
Batilla.
Imperator.
Trochiscus.
Phasianella.
*Thicolia.
- Family 2: *Trochidae*.
Pyramis.
*Cardinalia.
Trochus.
*Polyodon.
*Clangulus.
Phorcus.
*Ziziphinus.
Canthiridus.
*Thalotia.
Monodonta.
- *Gibbium.
Gibbula.
Rotella.
*Talopia.
*Camitia.
Delphinula.
- Family 3: *Stomatellidae*.
Stomatella.
*Gena.
- Family 4: *Haliotidae*.
Stomatia.
Haliotis.
Padollus.
*Deriobranchus.
Seissurella.
Pleurotomaria.
- Family 5: *Fissurellidae*.
Parmophorus.
Emarginula.
Diodora.
Fissurella.
Macrochisma.
*Pupillia.
*Luicapina.
Fissurellidia.
- Family 6: *Neritidae*.
Nerita.
Pileolus.
*Culana.
Neritina.
Clithon.
*Dostia.
Velates.
Navicella.
- Family 7:
Ampullariadae.
Ampullaria.
*Marisca.
Lanistes.
Asolene.
Ampulloidea.
- Family 8: *Ianthinidae*.
Ianthina.
- Family 9: *Atlantidae*.
Atlanta.
Helicoplegma.
*Helicophora.
2. *Eriophthalma*.
Family 1: *Naticidae*.
Natica.
Neverita.
Nacca.
*Cepatia.
Mammilla.
- *Cernina.
Globulus.
Naticina.
Cryptostoma.
Stylina?
*Radula?
- Family 2: *Melaniadae*.
Littorina.
Hydrobia.
*Amnicola.
Assimineae.
Lithoglyphus.
*Risella.
Nematura.
Paludestrina.
Lacuna.
*Medoria.
*Niomia.
Merria.
*Fossar.
Pagodus.
*Modulus.
Solarium?
*Torinia.
Bifrontia.
Turritella.
Haustator.
*Zaria.
*Mesalia.
*Eglisia.
Eulima.
*Nisso.
*Bacalia.
Rissoa.
*Nectia.
*Turbonella.
- p. 148.
Rissoina.
Chemnitzia.
*Tania.
Vibex.
Melania.
*Thaira.
Pachystoma.
*Lampania.
*Potamia.
Proto.
Pyrena.
Anculosa.
Io.
Melanopsis.
Potamides.
Tympanotomus.
Telescopium.
*Pyraze.
Vertagus.

- Cerithium.
 Ceriphasia ?
 Acione.
 Scalaria.
 Clathrus.
 *Cyclotrema.
 Cornu ?
- Family 3 :
Truncatellidæ.
 Truncatella.
- Family 4 : *Paludinidæ*.
 Paludina.
 Meladomus.
 Bithinia.
- Family 5 :
Pyramidellidæ.
 Pyramidella.
 Odostomia ?
 Nerinea ?
- Family 6 :
Tornatellidæ.
 Tornatella.
 Solidula.
 *Cinulia.
 Monotygma.
- Section II :
 HETEROBRANCHIATA.
 Order III :
 PLEUROBRANCHIATA.
- Family 1 : *Bullidæ*.
 Bulla.
 Bullæa.
 Acera.
 Doridium.
 Gasteropteron.
- Family 2 : *Aplysiadæ*.
 Aplysia.
 Dolabella.
 Notarchus.
- Family 3 : *Umbrellidæ*.
 Umbrella.
 Tylodina.
- Family 4 :
Pleurobranchidæ.
 Pleurobranchus.
 Berthella.
 Pleurobranchia.
- Family 5 :
Pterotracheidæ.
 Pterotrachea.
 Firola.
 Carinaria.
- Argonauta.
 Bellerophon.
- Order IV :
 GYMNORANCHIATA.
- Family 1 : *Doridæ*.
 Doris.
 Hexabranchnus.
 Asteronotus.
 Dendroris.
 Glossodoris.
 Actinodoris.
 Pterodoris.
 Actinocyclus.
 Onchidoris.
 *Brachychlamys.
 Polycera.
 Villiersia.
 Plocamophorus.
 *Cladophora.
 Triopa.
 Idalia.
 Dimorpha.
 Thecathera.
- Family 2 : *Tritonidæ*.
 a. Glaucus.
 Laniogerus.
 Eolida.
 Eolidia.
 *Styliger.
 Phyllodesmium.
 Flabellina.
 Bursiris.
 Cavolinia.
 Calliopea.
 *Liopa.
 b. *Tethya.
 *Malybe.
 Melibæa.
 Scyllæa.
 Tritonia.
 *Dota.
 Eubranchnus.
 Montagua.
 Duvaucelia ?
 Tergipes.
- Family 3 :
Placobranchidæ.
 Placobranchnus.
 Acteon.
- Family 4 : *Phyllidiadæ*.
 Phyllidia.
 Diphyllidia.
- Family 5 : *Patellidæ*.
 Patella.
 Patina.
 Helcion.
- Nacella.
 *Lepeta.
- Family 6 : *Chitonidæ*.
 a. Chiton.
 Acanthopleura.
 *Tonichia.
 b. *Acanthochetes.
 Chitonellus.
 Cryptoconchus.
 *Amicula.
- Order V :
 PNEUMONORANCHIATA.
- Family 1 : *Arionidæ*.
 a. Arion.
 Phosphorax.
 b. Helicaron.
 c. Nanina.
- p. 149.
- Stenopus.
 d. Zonites.
- Family 2 : *Helicidæ*.
 a. Limacellus.
 Scutelligera.
 Mehimatium.
 b. Limax.
 c. Parmacellus.
 Cryptella.
 *Pectella.
 Vitrina.
 Helicolimax.
 Omalonyx.
 d. Plectrophorus.
 e. Testacellus.
 f. Helix.
 Streptaxis.
 Anostoma.
 Helicodonta.
 Polydotes.
 Pleurodonta.
 Dentellaria.
 Carocolla.
 Iberus.
 Chilotrema.
 *Odontostylus.
 Helicophanta.
 Tapada.
 Amphibulina.
 *Epistylum.
 Mesomphyx.
 Proserpina.
 Delomphalus.
 Hyalina.
 g. Bulimns.
 Clausilia.

Siphonostoma.
 Bulimulus.
 Succinea.
 h. Achatina.
 Macrospira.
 Achatinella.

Family 3 :
Veronicellidæ.
 Veronicella.

Family 4 : *Onchidiadæ*.

Onchidium.
 Onchis.
 Peronia.

Family 5 : *Auriculidæ*.

Auricula.
 Melampus.
 *Sidula.
 *Tralia.
 *Detracia.
 Pedipes.
 Marinula.
 Ovatella.
 *Leuconia.
 Scarabus.
 Chilina (**Ida*).
 Carychium.
 Acme.

Family 6 : *Limnæadæ*.

Limnæa.
 Amphipeplea.
 Physa.
 *Diastropa.
 Aphlexus.
 Planorbis.
 Segmentina.
 Ancylus.
 *Velletia.

Family 7 : *Amphibolidæ*.

Amphibola.

Family 8 :

Siphonariadæ.

Siphonaria.

Family 9 : *Gadiniadæ*.

Gadinia.
 Sornetus.

Family 10 :

Cyclostomidæ.

a. Cyclostoma.
 *Licina.
 *Poteria.
 *Leonia.
 b. Annularia.
 *Bolania.

Cyclotus.
 Pterocyclos.
 Strophostoma.
 c. *Realia.
 Megalomastoma.
 d. *Callia.
 e. Pupina.
 Registoma.
 f. Pomatias.

Family 11 : *Helicinidæ*.

Helicina.
 Lucidella.
 Alcadia.

Class II :

CONCHIFERA.

Order I : PHYLLOPODA.

Family 1 : *Veneridæ*.

a. Artemis.
 b. Cytherea.
 Meroe.
 Gratelupia.
 Trigona.
 Chione.
 Circe.
 *Dorsina.
 Mercenaria.
 Anomalocardia.
 Cyprina.
 Tapes.
 Venerupis.
 *Clementia.

Family 2 : *Cyrenidæ*.

a. Cyrena.
 *Geloïna.
 *Velorita.
 b. Cyelas.
 c. Pisidium.

Family 3 : *Cardiadæ*.

Cardium.
 Hemicardium.
 Conocardium.
 Lichas ?

Family 4 : *Maclridæ*.

Maetra.
 Schizodesma.
 Spisula.
 *Cypricia.
 Lutraria.
 Cryptodon.
 Mulinia.
 Gnathodon.

Family 5 :

Mesodesmidæ.
 Mesodesma.
 Donacilla.
 Anapa.

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Family 6 : *Tellinidæ*.

a. Psammobia.
 Psammotea.
 b. Tellina.
 *Macronia.
 Arcopagia.
 *Strigella.
 c. Ligula.
 Semele.
 Cumingia.
 d. Petricola.
 Clotho.
 e. Mysia.
 f. Donax.
 Hecuba.
 Cuneus.
 Latona.
 Iphigenia.
 Capsa.
 Galathea.

Order II : CLADOPODA.

Family 1 : *Pholadæ*.

Pholas.
 *Barnia.
 *Zirfæa.
 *Mactresia.
 *Talona.
 Xylotrya.
 *Guetera.
 Iouannetia.
 Teredina.
 Teredo.
 *Bankia.
 *Kuphus.

Family 2 :

Gastrochænadæ.

Aspergillum.
 *Fægia.
 *Bryopa.
 Clavagella.
 Fistulana.
 Gastrochæna.
 Septaria ?

Family 3 : *Solenidæ*.

Solen.
 Ensis.
 *Pharus.
 Culltellus.

- Solecurtus.
 Panopea.
 Glycimeris.
 *Ctenoconcha.
- Family 4 : *Anatinidæ*.
 a. Auriscalpium.
 Periploma.
 Cochloidesma.
 *Hemicyclostoma.
 b. Thracia.
 c. Lyonsia.
 *Myodora.
 d. Chamostrea.
 Myochama.
- Family 5 : *Myadæ*.
 Mya.
 Platyodon.
 Sphænia.
- Family [6] : *Corbulidæ*.
 Corbula.
 *Azar.
 Lentidium.
 *Neara.
- Family 7 : *Pandoridæ*.
 Pandora.
- Family 8 : *Solenomyadæ*.
 Solenomya.
- Family 9 : *Galeomnidæ*.
 Galeomma.
- Family 10 : *Saxicavidæ*.
 Saxicava.
 Hiatella.
- Order III : GONIOPODA.
 Family 1 : *Chamidæ*.
 Chama.
 Arcinella.
 Diceris.
 Caprina?
- Family 2 : *Etheriadæ*.
 Etheria.
 Mulleria?
- Family 3 : *Carditidæ*.
 Cardita.
 *Jesonía.
 *Agaria.
 Venericardia.
 *Ophis.
 Myoconcha.
- Family 4 : *Crassinidæ*.
 Astarte.
 Goodallia.
 Nicania.
 *Ginorga.
- Family 5 : *Crassatellidæ*.
 Crassatella.
- Family 6 : *Isocardiadæ*.
 Isocardia.
- Family 7 : *Lucinidæ*.
 a. Lucina.
 Semele.
 Diplodonta.
 Cyrenella.
 Myrtea.
 Corbis.
 Mysia.
 b. Loripes.
 Ungulina.
 c. *Lenticularia.
 *Verticordia.
 Thetis.
- Family 8 : *Unionidæ*.
 Anodon.
 Margaritana.
 Alasmodon.
 *Damaris.
 Unio.
 *Heterodon.
 Dipsas.
 *Monocondyla.
- Family 9 : *Iridinidæ*.
 Iridina.
 *Leila.
 Pleiodon.
 Hyria.
 Castalia.
- Family 10 :
Mycetopodidæ.
 Mycetopus.
- Family 11 : *Trigoniadæ*.
 Trigonia.
- c. *Noetia.
 *Argina.
 *Licarea.
 Pectunculus.
 Trigonoœlia.
 *Cannabina.
 d. *Limmopsis.
 e. Nucula.
 Leda.
- Order IV : POGONOPODA.
 Family 1 : *Tridacnidæ*.
 Tridacna.
 Hippopus.
- Family 2 : *Dreissenidæ*.
 Dreissena.
 Congeria.
 Mytilimeria.
- Family 3 : *Mytilidæ*.
 Mytilus.
 Modiola.
- Family 4 : *Crenellidæ*.
 Crenella.
 *Modiolarca.
- Family 5 : *Pinnidæ*.
 Pinna.
 *Atrina.
- Family 6 : *Aviculidæ*.
 a. Malleus.
 Vulsella (Reniella).
 Avicula.
 Margarita.
 Pterynea.
 Monotis.
 *Wolfataria.
 Posidonia.
 b. Crenatula.
 *Dalacia.
 Inoceramus.
 Catillus.
 Pachymya.
 Perna.
 c. Gervillia.
- Order V : MICROPODA.
 Family 1 : *Pectinidæ*.
 a. Pecten.
 Pallium.
 Janira.
 Amusium.
 Neithæa.
 *Pyenodonte.
 b. Lima.
 Plagiostoma.

- **Limacæula*.
c. *Pedum*.
- Family 2 : *Spondylidæ*.
Spondylus.
Pachytos.
Podopsis.
Dianchora.
Plicatula.
Hinnites.
Harpax.
- Family 3 : *Ostreidæ*.
Ostrea.
Gryphæa.
Exogyra.
Alectryonia.
**Plectronia*.
Carolia.
Mulleria.
- Family 4 : *Placunidæ*.
Placuna.
- Family 5 : *Anomiadæ*.
Anomia.
Placunanomia.
Pododesmus.
- Class III :
BRACHIOPODA.
- Family 1 : *Lingulidæ*.
Lingula.
- Family 2 : *Terebratulidæ*.
a. *Terebratula*.
b. *Spirifer*.
- Family 3 : *Productidæ*.
Productus.
Calceola?
- Family 4 : *Thecideidæ*.
Thecidea.
- Family 5 : *Craniadæ*.
Crania.
- Family 6 : *Discinidæ*.
Discina.
- Class IV :
PTEROPODA.
- Order I : THECOSOMATA.
- Family 1 : *Cleodoridæ*.
a. *Hyalæa*.
**Diacria*.
b. *Cleodora*.
Balantium.
Pleuropus.
Vaginella.
Creseis.
Brochus.
Psyche.
Euribia.
- Family 2 : *Limacinidæ*.
Limacina.
- Family 3 : *Cuvieridæ*.
Cuvieria.
**Tripteres*.
- Family 4 : *Cymbuliadæ*.
Cymbulia.
- Order 2 :
GYMNOSOMATA.
- Family 1 :
Pneumodermidæ.
Pneumodermon.
Spongobranchia.
Trichoeyelus.
- Family 2 : *Cymodoceadæ*.
Cymodocea.
- Family 3 : *Clionidæ*.
Clio.
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Class V :
CEPHALOPODA.
- Order I : SEPIOPHORA.
- Family 1 : *Octopodidæ*.
Ocythoe.
Octopus.
Eledona.
Philonexus.
- Family 2 : *Sepiadæ*.
Sepiola.
Onychoteuthis.
**Peratoptera*.
Ommostrephes.
Loligopsis.
Cranchia.
Loligo.
Sepioteuthis.
Sepia.
Beloptera.
- ? Family 3 : *Belemnitidæ*.
Belemnites.
Belemnosepia.
- Family 4 : *Spirulidæ*.
Spirula.
- Family 5 : *Ammonitidæ*.
Ammonites.
Planites.
Globites.
Crioceratites.
Cyrtoceras.
Clymene.
Scaphites.
Hamites.
Turrillites.
Baculites.
- Order II :
NAUTILOPHORA.
- Family 1 : *Nautilidæ*.
Omphalia.
Nautilus.
Lituites.
**Orthostoma*.
Gyroceratites.
Orthoceras.
Conoceras.
**Cyrtolites*.
Actinoceras.
- Family 2 : *Goniatidæ*.
**Phragmolites*.
Ceratites.
Goniatites.

JOHN EDWARD GRAY.

October 16, 1840.

The names which were new to science in the preceding list I have marked with an asterisk, but it will be obvious to every student that these cannot be treated otherwise than as *nomina nuda*, and must date from some later introduction.

In the forty-third edition, dated 1841, the same general account of the Mollusca is given as in 1840A, and a list follows, the note at the

commencement reading: "The following List exhibits the series of genera of *Mollusca* at one view, and the numbers indicate the Table Cases in this Gallery, in which the genera in the collection are placed." The succeeding list extends from pp. 124-30, and almost exactly agrees with the 1840A list.

The forty-fourth edition, dated 1842, however, presents a troublesome complication. The general account is entirely rewritten, and diagnostic remarks are given of the genera, including most of those indicated as new in the forty-second edition, and an extended list follows. The remarks appear to me to be insufficient to establish the names, but in order that they may be fairly considered I reproduce them on pp. 302-9.

The forty-fifth edition was published in 1843, and on p. 10 the following note appears: "For an explanation of the method on which the Zoological Collection is arranged, and a list of the genera, see a small work called the 'Guide to the Zoological Collection', sold in the Hall, where may also be had a 'List of the Species of Mammalia', with the Synonymes."

Herein the matter relating to the "Shells of Molluscous Animals" is reduced to $4\frac{1}{2}$ pages, and the list is omitted. The subject is rewritten very briefly in the following manner: "Table 17. The Top Shells (*Trochus*) and their allied genera, as the pyramid (*Pyramis*). The rosary (*Clangulus Pharaonicus*). The jujube berry (*Trochus Ziziphorus*). The iris or rainbow eardrop (*Cantherus Iris*), from New Zealand. The button shell (*Rotella lineolata*). The strawberry (*Monodonta*). The gold button (*Livona aurea*), which is peculiar for the light golden colour of the pearl. The dolphin (*Delphinula*)." This is exactly repeated in the forty-sixth edition (published in 1844), which contains none of the names credited by Gray himself to "1844". In the forty-fourth to the sixty-third (the last) editions there is nothing relating to the systematic study of Molluscs worthy of note.

It has now been shown that the forty-fourth edition, published in 1842, is the most important one, and needs careful consideration. It is also obvious that the diagnoses there given cannot be literally accepted, as most of them are merely comparative ones, and the fact must not be overlooked that Gray used many of the common generic names in a different sense to that hereafter assigned to them. Thus in the Proc. Zool. Soc. article we are told, for instance, that *Vermetus*, Gray, 1840, was not *Vermetus*, Adanson; *Entalis* not *Entalis*, DeFrance; *Oratilla* not *Oratilla*, Bivon.; *Potamides* not *Potamides*, Brongn.; and *Clathrus* not *Clathrus*, Oken, 1815.

It is on account of such difficulties that I would advocate the rejection of the whole of the names used in this edition, and date them all from 1847; but, as this is simply an individual opinion, I am giving the whole of the diagnoses so that this matter may now be fully discussed, and a definite policy of rejection or acceptance adopted. There appear to be few alterations necessary through the adoption of the former policy, which seems to me to best favour accuracy.

In the Proc. Zool. Soc. (Lond.), 1847, p. 129 et seq., a paper was published entitled "A List of the Genera of Recent Mollusea, their Synonyma and Types by J. E. Gray". In the introduction is written: "I have been induced to send it in its present state, as I am constantly requested by both English and continental conchologists to supply them with copies of the Synopsis of the British Museum for 1838, 1840, 1842, and 1844, which contains a list of the genera of Mollusea, and which is now out of print, and also often to give them information with regard to the authorities for the several genera contained in that list, which shows that there is an evident want of some recent information on this subject. . . . The arrangement followed is that which was proposed in the Synopsis of the Contents of the British Museum for 1838, and which has been gradually modified in the different editions as I have become better acquainted with the animals of the different genera."

It is this list which brought into prominence the "Synopsis" names, these being there quoted as "Gray Syn. 1840", "Syn. B.M.", "S.B.M.", or simply "Gray 1840". I have therefore carefully gone through that list, and taken out all the names Gray there credited to himself as introduced in the Synopsis. As usual in all of Gray's work discrepancies are at once evident, names being given which do not appear in the Synopsis, and some I have noticed as new in the Synopsis are not included in the 1847 list. Further, Gray constantly quotes 1844, and generally after this a number. This shows great carelessness, since all these 1844 references, and there are many, should be 1842, where the number given agrees with the page on which the genus is diagnosed. It has been suggested that an alphabetical list would prove serviceable, and therefore I tabulate the names on that method and give after each its definition which appeared in 1840 or 1842, or the disposal of it in 1847, according to the Proc. Zool. Soc. article.

Acanthochetes, 1840. 1847. *Acanthochites*, Risso.

Agaria, 1840. In 1847 type is given as *Chama Agar*.

Alcadia, 1840, p. 130. 1840A, p. 134. "The *Helicinae* have a simple mouth. *Alcadia* differs in having a slit in front of the mouth, into which is fitted the tooth-like process of the operculum."

Amathina, 1842. 1842, p. 63. "The *Amathina* differ from *Capulus* in having three or more strong longitudinal ridges in front."

Amicula, 1840, p. 123. 1840A, p. 127. "*Acanthochetes* is peculiar for having a bundle of bristles placed on each side of the valves; and *Chitonellus* and *Amicula* only differ in having the valves nearly hidden in the mantle of the animals."

Annicola, 1840. 1847. *Annicola* sp., Anthony.

Anapa, 1840. In 1847 quoted as *Anapa*, Gray, 1844, and type given as *Erycina petitiana*.

Argina, 1840. 1842, p. 81. ". . . and *Argina* are ovate, subcordate, convex shells with a crenated margin, and the front group of teeth small and roundish: the hinge teeth are all equally transverse."

- Atrina*, 1840. 1842, p. 83. "The *Pinna* have an elongated shell with a longitudinal crack filled with a cartilage in the middle of each valve, and *Atrina* are shorter shells without any such crack."
- Azor*, 1840. In the Proc. Zool. Soc. 1847, on p. 186, *Azor*, Leach, MSS. 1819, is included with type *Solen vespertinus*. On p. 189, *Azor*, Leach, MSS. 1819, is again included with type *Solen antiquatus*. Its usage in connexion with the latter species needs investigation.
- Bacalia*, 1840. Does not seem to be further mentioned by Gray, either in 1842 or 1847. H. & A. Adams (Gen. Rec. Moll., vol. i, p. 312, 1854) quote it as a synonym of *Littorina*, a conclusion which its position in the previous tables (between *Nisso*, = *Niso*, and *Rissoa*) would not have suggested.
- Baukia*, 1840. 1842, p. 76. "In *Baukia* they [the pallets of *Teredo*] are elongated, and formed of small cones one within the other, looking somewhat like a quill."
- Barbatia*, 1840. 1842, p. 81. "The *Barbatia* are elongated shells, covered with a hairy periostraca; the teeth on the middle of the line are small, of the ends large and oblique."
- Barnia*, 1840. 1842, p. 76. "*Pholas* has an elongated shell with three pieces on the back. The *Barnia* has only one piece, and the *Zirfaea* are short shells with very large gapes at each end, and no distinct dorsal pieces. The *Martesia*, when the animal arrives at full size, closes up the gape in front of the shell with a shelly plate, and the dorsal ligament is covered with a large shield-like convex plate. The *Talona* differ from the latter in being longer, and in the back margin being reflected, and only furnished with two small back pieces."
- Bolania*, 1840. Not further mentioned, either in 1842 or 1847.
- Brachychlamys*, 1840. 1847. *Brachychlanis*, Ehr.
- Bryopa*, 1840. 1842, p. 77. "The *Bryopa*, which are only known in a fossil state, appear to have lived in sand like the *Aspergillum*, for the tubes are of a regular club shape with a fringe of small tubes round the disk."
- Callia*, 1840, p. 129. 1840a, p. 133. "The *Callia* have a peculiarly polished shell very like the former [*Pupina*], but they want the groove."
- Camitia*, 1840. 1842, p. 57. "The *Talopia* are like the *Rotella*; the shell is striated and umbilicated, the umbilicus being edged with a striated callus edge, which in *Camitia* is so large as nearly to hide it."
- Cannabina*, 1840. 1847. ? *Cannabina*, Gray, 1840. No type or further information given.
- Cardinalia*, 1840. 1842, p. 56. "In *Pyramis* the front of the inner lip has a slight canal, and in *Cardinalia* it appears notched."
- Cepatia*, 1840. 1842, p. 60. "The operculum of *Natica* is simply horny; *Cepatia* differs in the axis being covered with a large callosity. *Mammilla* chiefly differs from the latter in the axis

of the shell being covered with a large callosity, and *Naticaria* in having a thin oblong shell with a large oblong mouth and a thin inner lip. *Cernina* is imperforated with a large mouth, and the inner lip callous."

In 1847 Gray informs us that *Mammilla*, Gray, 1840 = *Polinices*, Montf., 1810; and *Naticaria*, Gray, 1840 = *Mammilla*, Schum., 1817.

Cernina, 1840. See preceding note.

Cinulia, 1840. 1842, p. 62. "The *Cinulia* are like the *Tornatella* with two plaits, and the outer lip is thickened externally."

Cladophora, 1840. In 1847 given as a synonym of *Triopa*, Johnst., 1838; and *Liopa*, Gray, 1840, quoted as a misprint for this name, though the two names are given in different families.

Clangulus, 1840. 1847. *Clanculus*, Montf.

Clementia, 1840. 1842, p. 75. "The *Tapes* and *Venerupes* have oblong shells with very compressed teeth, and the *Clementia* are like the latter, but are very thin, and have a cavity in the margin before and behind the teeth."

Ctenoconcha, 1840, p. 135. 1840A, p. 139. "*Ctenoconcha*, which has many characters in common with the *Solens*, has the teeth like *Nucula*, but it has an external cartilage."

Culana, 1840. 1842, p. 58. "The *Pileoli* are [fossil] shells of a conical form with a circular base; the inner lip is expanded as far back as the hinder edge of the whorls, forming an edge to the base. The *Culanæ* differ in being oblong and rather convex beneath."

Cyclostrema, 1840. 1847. *Cyclostrema*.

Cypricia, 1840. In 1847 given as of Gray 1837, but I have not found any reference of that date. The type is given as *M. anatina*, and *Labiosa*, Schmidt MSS., Møller, 1832, cited as coequal.

Dalacia, 1840. 1842, p. 83. "The *Dalacia* are like the *Crenatula*, but have the umbo some distance from the front of the hinge margin instead of quite at the angle."

Damaris, 1840, p. 38. 1840A, p. 142. "In *Unio*, *Damaris*, etc., it has lateral teeth of different degrees of development and form, so that they sometimes resemble cardinal ones."

Deriobranchus, 1840. 1847. *Deridobranchus*, Ehr.

Detracia, 1840. In 1847 type is given as *Vol. bullæoides*.

Diacria, 1840. 1842, p. 86. "In some [*Cleodoridæ*] there are lateral slits in the sides of the shell which are interrupted in front in the globular shells of the *Hyalææ*, and continued to the mouth in the elongate *Diacriæ*."

Diastrophia, 1840. In 1847 quoted as *Diastrophia*, Guild., Gray, and type given as *Ph. Guildingii*.

Dorsina, 1840. 1847. *Dosinia*.

Dostia, 1840. 1842, p. 58. "The *Dostiæ* differ [from *Clithon*] in having a nearly symmetrical shell with only the rudiment of a spire, and the inner lip, like *Neritina*, is only denticulated."

Dota, 1840. 1847. *Doto*, Oken, 1815.

- Eglisia*, 1840. 1842, p. 60. "The *Turritellæ* are turreted and marine; the mouth of the shell is squarish and the operculum orbicular, many whorled. The *Haustators* chiefly differ in the outer lip being marked with a deep notch leaving a groove on the whorls. The *Zaria* has an ovate mouth rather produced in front [p. 61]. *Mesalia* is very like the former, but the mouth is round and produced into a slight canal in front, and the front of the inner lip is slightly twisted. *Eglisia* has a round mouth with the outer lip rather thickened internally." In the Proc. Zool. Soc., 1847, Gray introduced a new name *Torcula* for *Haustator*, Gray, 1840, not Montfort, 1810.
- Epistylum*, 1840, p. 125. 1840A, p. 129. "The true *Helices*, *Helicodonta*, etc., have the peristoma of the shell thickened, while the *Helicophanta*, *Epistylum*, and *Proserpina* have it thin and sharp."
- Fægia*, 1840. 1842, p. 77. (Compared with *Aspergillum*.) "In *Fægia* the lower end is irregular, with scattered tubes, and destitute of any fringe."
- Fossar*, 1840. In 1847 *Forsar* is printed, but corrected in the errata. Type given, *Helix ambigua*, Linn. (= *Natica (fosar)*, Adams., 1757).
- Gasterosiphone*, 1842. 1842, p. 88. "In some of them [*Belemnitidæ*], as *Gasterosiphone*, the syphon is in the front."
- Geloina*, 1840. 1842, p. 75. "The *Cyrenæ* have three teeth in each valve, and the compressed lateral teeth striated across. The *Geloina* differ in the lateral teeth being smooth, and the *Velorita* has a short thick anterior lateral tooth close to the large cardinal ones."
- Gena*, 1840. 1842, p. 51. "The *Genæ* are thin, oblong, ear-shaped shells, with a very large animal and no operculum."
- Gibbium*, 1840. 1842, p. 57. "The *Gibbium* have a depressed top-shaped shell with perforated axes."
- Ginorga*, 1840. Not further mentioned, either in 1842 or 1847.
- Guetra*, 1840. In 1847 the type is given as *Fist. corniformis*.
- Harlea*, 1842. 1842, p. 78. "The *Harlea* are oblong, subquadrate, thin shells, with a sharp keel from the umbo and conical hinge teeth."
- Hatina*, 1842. 1842, p. 62. "The *Bivinæ* have an orbicular spiral operculum with an oblong lateral scar, like the *Trochi*. The *Vermilia* has the mouth of the tube surrounded by three spines, and the *Hatina* has no operculum."
- Helicophora*, 1840. 1842, p. 59. "The *Helicophoræ* always have oblong spiral unkeeled shells with an entire mouth."
- Hemicyclostoma*, 1840. 1847 = *Hemicyclonosta*.
- Heterodon*, 1840. Not mentioned in 1842 notes or in 1847.
- Ida*, 1840. This name, bracketed after *Chilina*, is not again mentioned in 1842 or in 1847.
- Jesonia*, 1840. In 1847 this is placed in the synonymy of *Mytilicardia*, Blainv., 1825.
- Kuphus*, 1840. 1842, p. 76. "The *Kuphus* has ovate pellets toothed at the tip; the tubular case of this genus is club-shaped, contorted, opaque, and closed at the end."

- Lampania*, 1840. Type given in 1847 as *Cerithium zonale*, Lam., and *Batillaria*, Benson, 1842, cited as a synonym.
- Lathirus*, 1840. 1847. *Latyrus*, Montf.
- Leila*, 1840, p. 138. 1840A, p. 142. "In *Iridina* and *Leila* the hinge edge is smooth, like *Anodon*, and the latter has a sharp syphonal inflection."
- Lenticularia*, 1840. 1842, p. 80. "The *Lenticularia* are solid shells, like the *Lucina*, but with the cartilages partly internal; they have a conical anterior lateral tooth."
- Leonia*, 1840. In 1847 still a nude name, neither the type being designated nor the name placed in synonymy.
- Lepeta*, 1840. 1842, p. 67. "In *Patella* the gills form a complete series round the edge of the mantle. In *Helicon* [*sic*] the series is interrupted over the head, and *Lepetæ* differ from both in the animal being destitute of any eyes."
- Leuconia*, 1840. In 1847 typified by *Voluta alba*.
- Licareia*, 1840. Not again mentioned, either in 1842 or in 1847.
- Licina*, 1840. In 1847 given as of Brown, 1756, with type *Turbo labea*.
- Limacula*, 1840. 1847. ? *Limatula*.
- Limnopsis*, 1840. 1847. *Limopsis*.
- Liopa*, 1840. 1847. *Triopa*.
- Liotia*, 1842. 1842, p. 57. "The Dolphin shells (*Delphinula*) differ from all the rest in being thick turbo-like umbilicated spinose shells with a round mouth, and the *Liotia* differs from *Delphinula* in having a regular margined mouth to the shell."
- Litharea*, 1840. 1842, p. 81. "The *Litharææ* are elongate, truncated behind, and live in holes in stones and rocks; the hinge teeth are all equally transverse."
- Livona*, 1840. 1842, p. 57. "The *Lironæ* are solid conical shells with a rounded mouth and a callosity partly covering the umbilicus."
- Lucapina*, 1840, p. 114. 1840A, p. 117. "In *Lucapina* the mantle covers the cancellated shell."
- Lunarea*, 1842. 1842, p. 81. "The *Lunarea* differ from the former [*Argina*] in the front group of teeth being replaced by an elevated ridge."
- Macroma*, 1840. 1847. ? *Macoma*.
- Mactresia*, 1840. 1847. *Martesia*.
- Malybe*, 1840. 1847. *Melibe*, Rang, 1829.
- Marisca*, 1840. 1847. ? *Marisa*.
- Medoria*, 1840. 1842, p. 60. "The *Medoria* are like the *Lacuna*, but more solid, and covered with a rough periostracum."
- Mesalia*, 1840. 1842, p. 60. See note under *Eglisia*.
- Modiolarca*, 1840. 1842, p. 82. "The *Crenellæ* are suborbicular, and the *Modiolaricæ* ovate elongated shells."—Note: *Modiolarca*, 1840, is thus a misprint for *Modiolaria*.
- Modulus*, 1840. 1842, p. 60. "The *Moduli* only differ from them [*Pagodus*] in the shell being more depressed and the inner lip having a distinct notch forming a tooth; they have been confounded with the *Monodonta*."

- Monocondyla*, 1840. 1847. *Monocondylea*.
- Myodora*, 1840, p. 136. 1840A, p. 140. "In the *Lyonsiæ* and *Myadoræ*, the cartilage pit is sunk into the hinge margin of each valve, and covered by a large flat hinge-piece; the shell of the former is thin and of the latter thick, with very unequal valves, the left one being flat."
- Mysia*, 1840. Appears twice on the same page (150), once in the Tellinidæ, and afterwards in the Lucinidæ.
- Neara*, 1840. 1842, p. 78. "The *Neara* have a thin nearly equi-valve shell produced into a beak behind and with small hinge teeth."
- Nectia*, 1840. Not again mentioned, either in 1842 or in 1847.
- Niomia*, 1840. 1842, p. 60. "*Nioma* has a white spirally striated shell with a deeply perforated axis." 1847. Given as a synonym, with *Merria*, of *Fanikoro*.
- Nisso*, 1840. 1847. *Niso*, Risso.
- Nætia*, 1840. Not again mentioned, either in 1842 or in 1847.
- Notosiphone*, 1842. 1842, p. 88. "And in another [*Belemnitidæ*], the *Notosiphone*, [the syphon is] in the dorsal part of the septa of the alveolus. The alveolus is sometimes obliterated."
- Odontostylus*, 1840. Not again mentioned, either in 1842 or in 1847.
- Ophis*, 1840. 1847. *Opis*, DeFrance, 1825.
- Orthostoma*, 1840. In 1847 fossil genera are not included, hence nothing further is given concerning this name.
- Pectella*, 1840. In 1847 included with a ? in front, and neither placed in synonymy nor type designated.
- Peraloptera*, 1840. Not again mentioned, either in 1842 or in 1847.
- Pharus*, 1840, p. 135. 1840A, p. 139. "In *Soleræ* and *Ensis* the foot is club-shaped, and the tubes are short and united. In *Pharus* the foot is long with a dilated end, and the syphons are elongate and separate."
- Phragmolites*, 1840. In 1847 nothing is mentioned of this, as the fossil genera are not included.
- Plectronia*, 1840. In 1847 nothing further is offered, whilst the name itself is accompanied by a ?.
- Polyodon*, 1840. 1847. ? *Polydonta*, Montf.
- Potamia*, 1840. 1847. ? *Potamis*.
- Poteria*, 1840. In 1847 neither type designated, nor placed in synonymy. *See 1850?*
- Pupillia*, 1840, p. 114. 1840A, p. 117. "In *Pupillia* the shell is surrounded by a sharp white edge."
- Pycnodonte*, 1840. 1847. ? *Pycnodonta*.
- Pyraze*, 1840. 1847. *Pyrazus*.
- Radula*, 1840. 1842, p. 60. "The genus *Radula* is referred here provisionally until its animal is known; the shell is solid and Nerite-like, with a rounded inner lip, having a deep notch in its centre; the throat is somewhat striated."
- Raleta*, 1840. 1842, p. 78. "The *Tomala* are like the *Corbulæ*, but have a triangular projecting plate with a ridge on each side in the left valve, and two triangular teeth in the other, and

- Raleta* differs from the latter only in having a narrow central pit, its right valve with a strong conical tooth falling into the large pit before the tooth in the left valve."
- Realia*, 1840. In 1841 the type cited as "*R*—? n.s."; therefore still a *nomen nudum* at that date.
- Risella*, 1840. 1842, p. 60. "*Risella* is like *Littorina*, but the shell is top-shaped, the whorls keeled, and the mouth rather square."
- Scaphura*, 1840. 1847. *Scaphula*.
- Senilia*, 1840. 1842, p. 81. "The *Senilia* have very thick shells, covered with a smooth olive periostraca; the hinge teeth are all equally transverse."
- Sidula*, 1840. 1842, p. 70. "The *Scarabus*, like *Ranella*, forms half a whorl between each period of rest, the thickened and reflexed parts of the lips forming an edge to each side of the shell. The *Sidulae* have a sharp internal ridge to the outer lip."
- Strigella*, 1840. 1847. *Strigilla*.
- Styliger*, 1840. 1847. *Stylifer*.
- Talonia*, 1840. 1842, p. 76. See note under *Barnia*.
- Talopia*, 1840. 1842, p. 57. See note under *Camitia*.
- Tania*, 1840. 1842, p. 60. "The genera *Tania*, *Anculosa*, and *Io* have the mouth of the shell truncated in front of the axis, as in *Achatina*, the former having a turreted, the second an ovate short, and the latter a fusiform shell with a large mouth."
- Tapada*, 1840. In 1847 given as a synonym of *Cantareus*, Risso, 1826.
- Tethya*, 1840. 1847. *Tethys*.
- Thaira*, 1840. 1847. *Tiara*.
- Thalotia*, 1840. 1842, p. 57. "In *Ziziphinus*, *Cantharidus*, and *Thalotia* the mouth is oblong and simple and the axis of the shell is covered by the inner lip; the former is top-shaped, the *Cantharidi* are ovate and green within."
- Thecathera*, 1840. 1847. *Thecaera*.
- Thicolia*, 1840. 1842, p. 56. "The *Thicolie* chiefly differ from the latter [*Phasianella*] in the animal being less ornamented with beards." In the Proc. Zool. Soc., 1847, Gray spells this name *Thicolea*, and cites it as intended for *Tricolea*, Risso.
- Tomala*, 1842. 1842, p. 78. See note under *Raleta*.
- Tonichia*, 1840, p. 123. 1840A, p. 126. "The *Tonichia* has the upper surface of the mantle bald and cartilaginous, and the under covered with a very hard striated skin."
- Torinia*, 1840. 1842, p. 60. "*Torinia* differs [from *Solarium*] in having a nearly orbicular operculum, which is very convex and marked with a spiral ridge looking like a pagoda."
- Tralia*, 1840. In 1847 the type given as *V. pusilla*.
- Tripteres*, 1840. 1847. *Triptere*.
- Tugonia*, 1842. 1842, p. 78. "The *Tagonia* have the same kind of process, but the shell is ovate, ventricose, with a large gape on its short hinder slope."
- Turbonella*, 1840. 1847. ? *Turbonilla*.
- Velletia*, 1840, p. 128. 1840A, p. 132. "The *Velletie* differ in the animal and shell being reversed, like the *Physæ*."

- Velorita*, 1840. 1842, p. 75. See note under *Geloina*.
Vermilia, 1842. 1842, p. 62. See note under *Hatina*.
Verticordia, 1840. 1842, p. 80. "The *Verticordiæ* are fossil shells, allied to the latter [*Cryptodon*]."
Wolfataria, 1840. Not again mentioned, either in 1842 or 1847.
Zaria, 1840. 1842, p. 60. See note under *Eglisia*.
Zirfæa, 1840. 1842, p. 76. See note under *Barnia*.
Ziziphinus, 1840. 1842, p. 57. See note under *Thalotia*.

In the Proc. Zool. Soc., 1847, I find the following quoted as Gray, 1840, which I have not found in the Synopsis either of 1840 or 1842: *Ersina*, *Isthmia*, *Lauria*, *Philippia*, and *Sarmaticus*.

It should be noted that Gray probably distributed shells between the years 1840 and 1847 under these new generic names, and that some of these may have been correctly introduced into literature by other authors.

I have observed that Philippi, in the Enum. Moll. Sic., vol. ii, p. 90, 1844, recorded that *Lucapina elegans*, Gray = *Fissurella cancellata*, Sow., and that *Pupillea aperta*, Gray = *F. hiantula*, Lamarck. This was only noticed through the misspelling of *Pupillia* attracting the writer's attention.

A name that seems to need rejection is *Livona*. In 1840 it is a *nomen nudum*; in 1842 it is indeterminable; in 1843 it is associated with a shell which is certainly not the one selected as the type in 1847.

In February, 1847, Philippi (Zeitschr. Malak., Jahr. iv, p. 21) introduced *Cittarium* for *Turbo pica*, and in November, 1847, that shell appeared as type of *Livona*, Gray. Unless *Livona* can be traced to an earlier legitimate introduction than the Proc. Zool. Soc., 1847, *Cittarium* must replace it.

Algoa and *Musica*. Although neither of these names appears in the tables in any edition of the Synopses the following notes are given:—

Musica, 1840, p. 112. 1840A, p. 114. "In general the shell is covered with a distinct periostraca as *Mitra*, *Voluta*, and *Musica*."

Algoa, 1840, p. 113. 1840A, p. 115. "In *Cypræa*, *Algoa*, and *Orula* the outer coat of the shell is polished." *Algoa* is never afterwards mentioned, but in the 1847 list Gray quotes *Musica* as of 1840.